



# Material Safety Data Sheet


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## Section 1 - Product and Company Identification

Product name : Citric Acid, Anhydrous
Other names : --
Product use : Use as sour agent and preservatives in the foods and drinks. In the field of the chemical industry, cosmetics and laundry, it is used as antioxidant, Plasticizers, detergent.
Supplier's name : San Fu Chemical Co., Ltd., Shan Hua Plant
Supplier's address : 340 Hsiao Hsin Li, Shan Hua Town, Tainan Hsien, Taiwan, R.O.C.
Supplier's phone : 06-5837608                      Emergency phone : 06-5837608
FAX. : 06-5839498

## Section 2 - Hazards Identification

Classification : <ol style="list-style-type: none"><li>1. Acute Toxicity Category 5</li><li>2. Corrosion/Irritation Category 2</li><li>3. Serious Eye Damage/Irritation Category 2A</li></ol>
The Most Important Hazards and effect Label element : <ul style="list-style-type: none"><li>■ Hazard symbol : Exclamation Mark </li><li>■ Signal word : Warning</li></ul>
Hazard statement : <ol style="list-style-type: none"><li>1. Harmful with ingestion (oral)</li><li>2. Harmful with skin contact (skin)</li><li>3. Harmful with inhalation (gas, vapor, dust, fog)</li><li>4. Cause skin tissue irritation</li><li>5. Cause severe eye irritation</li></ol>
Precautionary statement : <ol style="list-style-type: none"><li>1. Wear mouth protective equipments</li><li>2. Avoid contact with eyes and skin.</li><li>3. If contacted, wash with large amount of water then seek the medical attention immediately.</li><li>4. If swallowed, seek medical attention immediately</li></ol>
Others Hazard : --

## Section 3 - Composition/Information On Ingredients

Pure Substance :

Chemical name : Citric Acid, Anhydrous
Synonyms : Citric acid 、 2-Hydroxy-1,2,3-propanetricarboxylic acid 、 Aciletten 、 Anhydrous citric acid 、 beta-Hydroxytricarballic acid 、 Citretten 、 Citro
CAS No. : 77-92-9



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Ingredient contributing to the hazard(%) : 99~100%

## Section 4 - First Aid Measures

The First-aid Information :

- Inhalation : Move to the air fresh place, and beware of patient's breathing. If the discomfort occurs, seek the medical attention.
- Skin Contact :
  1. Wash with large amount of water for at least 20 minutes.
  2. If the irritation occurs, seek the medical attention.
- Eye Contact :
  1. Wash the eyes with large amount of water for at least 20 minutes.
  2. If the discomfort occurs, seek the medical attention.
- Ingestion :
  1. If swallowed with large amount of this substance, seek the medical attention immediately. If patient is conscious, give large amount of water to drink.
  2. Seek the medical attention immediately.

The Most Important Symptoms and Hazardous Effects : --

Protection of First-aiders : No specific regulation.

Notes to a Physician : --

## Section 5 - Fire Fighting Measures

Extinguishing Media : Water, powder, chemical foam, CO<sub>2</sub>

Specific Hazards when Fire-fight : --

Specific Fire-fighting Procedure : None

Specific Protection of Firefighters : Wear full piece protective goggles with positive pressure mode, dust proof chemical safety goggles, protective gloves.

## Section 6 - Accidental Release Measures

Personal Precautions : Avoid contact. Avoid generating into dust.

Environmental Precautions : Avoid generating the dust, keeps well ventilation.

Methods for Cleaning up : Sweep into the proper container for recycling or managing.

## Section 7 - Handling and Storage

Handling :

1. Maintain proper ventilation in the area.
2. Avoid generating and accumulating the dust.

Storage :

1. Keep in the container closed and tightly.
2. Store in the cool, dry and well ventilation place.
3. Away from the incompatibles.

## Section 8 - Exposure Controls & Personal Protection

Engineering measures :



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1. operate in the airtight area			
2. local exhausted equipments			
Control parameters			
TWA	STEL	Ceiling	Biological standards
--	--	--	--
Personal protective equipment :			
■ Respiratory Protection :			
1. Wear mask with filter function.			
2. In case of emergency, use the positive pressure mode air breathing apparatus.			
■ Hand Protection : Wear protective gloves.			
■ Eye Protection : Wear safety goggles.			
■ Skin and Body Protection : Wear protective clothing include boots, gloves, lab coat, apron or overalls to prevent skin contact.			
Hygiene measures :			
1. Remove contaminated clothes, clean thoroughly before reuse or disposal. Must advise the danger to the laundry worker.			
2. Wash hands thoroughly after handling this substance.			
3. Maintain a clean work environment.			

## Section 9 - Physical & Chemical Properties

Appearance : white or colorless crystal, white crystal like powder	Odor : odorless
Color : Transparent	Melting Point: 153 °C
pH value : 1.85(25°C)	Boiling point/boiling range : 175°C
Flammability: --	Flash point : --
Decomposition temp : --	Test method : --
Auto ignition temp : 1010°C ( powder )	Explosion properties : --
Vapor pressure : --	Vapor density : --
Density : 1.665 g/cm <sup>3</sup>	Solubility : 133 g/100 ml (20°C)
log Kow : -1.72	Evaporation Rate : --

## Section 10 - Stability & Reactivity Data

Stability : stable
Possible hazardous reactions under specific conditions : No reaction
Conditions to avoid : Heat, fire, source of ignition, dust and incompatible
Materials to avoid : Metal, oxidizer, base, reductant
Hazardous decomposition products : May generate CO and CO <sub>2</sub> with thermal decomposition.

## Section 11 - Toxicological Information

Route of exposure : Inhalation, skin contact, ingestion, eyes.
Symptoms : Inflammations, itchy, cough, nausea, vomit, diarrhea.



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## Immediate Toxicity :

1. Skin : Mild skin irritation with the symptoms of inflammations, itchy, pain.
2. Inhalation : Cause irritation of the respiratory tract with the symptoms of coughing, asthma.
3. Eye : irritation may cause eye damage.
4. Ingestion :
  - 4.1 Cause nausea, vomit diarrhea, Hematemesis.
  - 4.2 Swallow in large amount may cause
    - LD<sub>50</sub>: 3000gm/kg (Rat, Oral)
    - LC<sub>50</sub>: --

Specific effects : --

## Section 12 - Ecological Information

### Ecotoxicology :

- LC<sub>50</sub>(fish) : 440-760 mg/l/96 h(IUCLID)
- EC<sub>50</sub>(Aquatic Invertebrates) : ~120 mg/l/72 h(IUCLID)
- Bioconcentration factor (BCF) : --

### Persistence and degradability : --

- Half-Life (Air) : --
- Half-Life (Water surface) : --
- Half-Life (Groundwater) : --
- Half-Life (Soil) : --

Bioaccumulative potential : --

Mobility in soil : --

Other adverse effects : --

## Section 13 - Disposal Considerations

Methods of disposal : Follow the local government laws and regulation

## Section 14 - MSDS Transport Information

UN classification number : --

Proper D.O.T Shipping Name : --

Hazard Class : --

Packing Group : --

Marine pollution : --

Specific precautionary transport measures and conditions : --

## Section 15 - Regulatory Information

### Regulations :

1. Regulations for Labor Safety and Health Installations
2. Regulations for Chemical Hazard Communication



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|---|
| 3. Road Traffic Safety Regulations  |
| 4. Industrial Waste Storage and Disposal Regulations and Facility Standards |

## Section 16 - Other Information

Literature references	MSDS database from Merck Index Chemical Hazards Chinese Database, Council of Labor Affairs		
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